

REMARKS

Claim Amendments

Claims 1-16 have been cancelled. Cancellation of these claims is expressly without waiver of the right to file and obtain claims directed to the cancelled subject matter in divisional or continuing applications claiming priority to this application, or from a related application, under 35 U.S.C. § 120.

Claims 1, 19, 20, 23, 24 and 25 have been amended to improve their form. Support for these amendment can be found throughout the specification, e.g., at pp. 38 and 49-50.

Claims 26-51 have been added. Support for claims 26-30 is provided throughout the specification. Particularly, support for claim 26 can be found, e.g., at pp. 28-35, 50 and 53. Support for claims 27 and 28 can be found, e.g., at pp. 37 and 52 and Fig. 15. Support for claim 29 can be found, e.g., at pp. 13 and 38 and Fig. 14. Support for claim 30 can be found, e.g., at pp. 49-50. Support for claims 31-34 can be found, e.g., at p. 50. Support for claims 35-46 can be found in original claims 17-25. Support for claim 47 can be found, e.g., at pp. 28-35, 50 and 53. Support for claims 48 and 49 can be found, e.g., at pp. 37 and 52 and Fig. 15. Support for claim 50 can be found, e.g., at pp. 13 and 38 and Fig. 14. Support for claim 51 can be found, e.g., at pp. 49-50.

Restriction Requirement

The Examiner has required restriction of claims 1-25 of this application under 35 U.S.C. § 121 into one of the following five groups:

Group I: Claims 1 - 10, 14 - 16, drawn to a polynucleotide (SEQ ID NO:1) encoding an endomannosidase (SEQ ID NO:2), nucleic acid sequences that are degenerate variants of SEQ ID NO:1, sequences at least 78% identical to SEQ ID NO:1, nucleic acid sequences encoding a polypeptide at least 77% identical to SEQ ID NO:2, nucleic acid sequences which hybridize under stringent conditions to SEQ ID NO:1, vectors and host cells containing said polynucleotide, classified in class 435, subclass 320.1.

Group II: Claims 1 - 10, drawn to a polynucleotide (SEQ ID NO:3) encoding an endomannosidase (SEQ ID NO:4), nucleic acid sequences that are degenerate variants of SEQ ID NO:3, sequences at least 78% identical to SEQ ID NO:3 nucleic acid sequences encoding a polypeptide at least 77% identical to SEQ ID NO:4, nucleic acid sequences which hybridize under stringent conditions to SEQ ID NO:3, vectors and host cells containing said polynucleotide, classified in class 536, subclass 23.1.

Group III: Claims 11 - 13, drawn to a fusion protein comprising SEQ ID NO:2 or a sequence at least 77% identical to SEQ ID NO:2, classified in class 530, subclass 350.

Group IV: Claims 11 - 13, drawn to a fusion protein comprising SEQ ID NO:4 or a sequence at least 77% identical to SEQ ID NO:4, classified in class 530, subclass 350.

Group V: Claims 17 - 25, drawn to a method for modifying glycosylation structures in a lower eukaryote, classified in class 435, subclass 69.1.

In response to the restriction requirement, applicant provisionally elects the subject matter of Group V, claims 17 - 25, with traverse, for further prosecution in the present application.

Applicant traverses the restriction requirement and requests reconsideration thereof. The elected invention (Group V) is directed to a method of modifying glycosylation structures in a lower eukaryote by expressing an endomannosidase activity. This endomannosidase activity can be encoded by a nucleic acid of Groups I or II, or can be derived from the fusion proteins of Groups III or IV.

SEQ ID NO:1 and SEQ ID NO:3 encode closely related human and murine homologues of a novel endomannosidase enzyme (SEQ ID NO:2 and SEQ ID NO:4, respectively) which have approximately 84.9% identity. Group I includes "nucleic acid sequences at least 78% identical to SEQ ID NO:1" and "nucleic acid sequences encoding a polypeptide at least 77% identical to SEQ ID NO:2." Group II includes "nucleic acid sequences at least 78% identical to SEQ ID NO:3" and "nucleic acid sequences encoding a polypeptide at least 77% identical to SEQ ID NO:4." Because of the high degree of sequence identity between the proteins encoded by SEQ ID NO:1 and SEQ ID NO:3, searches with respect to Group I would be co-extensive with the searches with respect to Group II. Similarly, searches with respect to Groups III would be co-extensive with the searches with respect to Group IV.

Accordingly, there would be no serious burden on the Examiner for search and examination of the combined groups.

For the above reasons, applicant respectfully requests that the Examiner rejoin the claims of Groups I - V for purposes of examination.

Conclusion:

Entry of this Amendment and allowance of the claims as submitted herewith is respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-1075, from which the undersigned is authorized to draw.

Respectfully submitted,



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